



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,097	10/14/2003	Aldon R. Reinhardt	VTI-002	6821
22888	7590	06/30/2006	EXAMINER	
BEVER HOFFMAN & HARMS, LLP TRI-VALLEY OFFICE 1432 CONCANNON BLVD., BLDG. G LIVERMORE, CA 94550			WILSON, GREGORY A	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/686,097

Applicant(s)

REINHARDT, ALDON R.

Examiner

Gregory A. Wilson

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 35-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 35-52 and 55-58 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 53 and 54 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

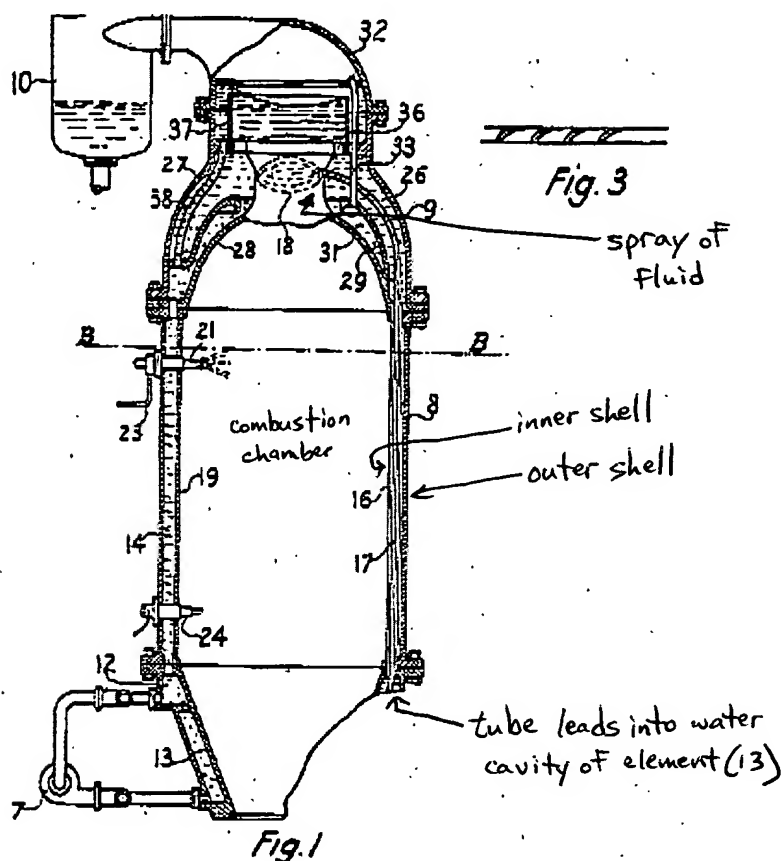
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 3, 5, 36, 40, 42-45, 47-52, and 56-58** are rejected under 35 U.S.C. 102(b) as being anticipated by **Noack (1,948,940)**. **Noack** discloses a steam (vapor) generator and includes a combustion chamber, an outer structure (14) surrounding the combustion chamber wherein a cavity is located between the combustion chamber and the outer structure, a water inlet (13) located in the outer structure and receives water into the cavity from an inherent water supply (shown by tube (26?) extending into water inlet portion 13), a water conduit (16?, not accurately shown) coupling the cavity to a water injection element (see element 18) so that water can be introduced into the combustion chamber from the cavity. The combustion chamber and the outer structure constitute the first and second cylindrical element wherein the structures are tapered at each end. The combustion chamber furthermore includes an ignition inlet (24) extending into the combustion chamber located at one end, a fuel inlet (23) for providing fuel to the combustion chamber, an air inlet (which is inherent to cause combustion and is well known to be provided by a blower source) at the same end as the fuel & ignition inlet ends, and a vapor outlet (32) extending out of

the combustion chamber and at an opposing end. SEE Figure for clarification of claimed elements.



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 41, 46, and 55** are rejected under 35 U.S.C. 103(a) as being unpatentable over Noack (1,948,940) in view of a statement of Official Notice. With regard to claims 41 and 55, it would have been obvious to provide the water inlet of Noack with a water pump since the examiner takes Official Notice of the fact that it is common knowledge in the art of supplying water with devices such as this and doing such would be within the level of ordinary skill in the art. With regard to claim 46, the examiner takes Official Notice that the use of propane or natural gas as a fuel supply would be considered common knowledge in the art and would be within the level of a person of ordinary skill the art.

Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noack (1,948,940). Noack discloses a vapor generator having an ignition inlet, fuel inlet, and air inlet as stated above, but does not give specific distances in their relationship to the generator itself. It would have been an obvious matter of design choice to modify the locations of the distances of these inlets, since the applicant has not disclosed that for example having an ignition inlet and fuel inlet located about 3 ½ inches from one end of the combustion chamber solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill. It appears that the claimed feature does not distinguish the invention over similar features in the prior art since, the vapor generator of Noack will perform the invention as claimed by the applicant with any number of fuel/ignition/air inlet locations.

***Allowable Subject Matter***

**Claims 4, 6, 53, and 54** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 2/27/06 have been fully considered but they are not persuasive. In reply to applicants arguments that element 18 of Noack is not configured to introduce water to a combustion chamber, and therefore cannot be a water injection element and additionally that element 18 must represent combustion gases that are discharged from the chamber through tube 17, the examiner respectfully disagrees. The examiner used the indication of "element 18" to direct the applicant to the area where water is introduced into the combustion chamber since Noack lacks an element number to indicate the outlet of tube (26?) which is also not clearly shown. Since the invention is a steam generator and element (21) is a fuel injection nozzle and element (24) is the spark plug, one of ordinary skill is likely to conclude that the area indicated by element (18) is where water is sprayed in order to produce steam. However, in a good faith attempt to more convincingly respond to the applicants remarks the examiner directs the applicants attention to figure 2, which shows gas tubes (17) surrounding the steam generator in a heat exchange relationship, but upon further inspection, the tube resulting in spray (18) is between the gas tubes (17) and extend into a concentric area identified by water inlet (13) which in anticipation of claim 40, would constitute a water

supply, it is hereby concluded that element (18) indicates an injection of water spray. In response to applicants argument that Noack fails to teach an outer structure as recited by claim 1, the examiner respectfully disagrees. Noack indicates that top section 9 forms a hollow combustion chamber, but a person of ordinary skill in the art can see that the combustion chamber is the interior section of what is indicated by element (9) (SEE Figure 2) which clearly shows the interior as the combustion chamber, likewise any structure surrounding the combustion chamber anticipates the applicants invention. It appears there are inaccuracies in the element numbers of Noack which is why in the previous rejection the examiner saw fit to include a diagram to make the record clear. The second cylindrical element (SEE previous rejection of 11/22/05) is what the examiner considers the outer structure. The first cylindrical element is the initial enclosure of the combustion chamber.

In response to the applicants arguments that the steam generated by Noack is not exhausted from the combustion chamber, the examiner respectfully disagrees and directs the applicants attention to steam dome (32) which is steam exhausted as a result of heat from the combustion chamber and water injected in the area of element (18).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory A. Wilson whose telephone number is (571)272-4882. The examiner can normally be reached on 7 am - 4:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3749

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**GREGORY WILSON**  
**PRIMARY EXAMINER**

*Gregory A. Wilson*

Gaw

June 24, 2006